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| PRE-APPEAL BRIEF REQUEST FOR REVIEW | | Docket Number (Optional) | |
|--|----------------------|--------------------------|--|
| | | 1875.0640001 | |
| I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)] on _____ Signature _____ Typed or printed name _____ | Application Number | Filed | |
| | 09/973,871 | October 11, 2001 | |
| | First Named Inventor | | |
| | Fred A. Bunn | | |
| | Art Unit | Examiner | |
| | 2154 | Lin, Kenny S. | |
| <p>Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.</p> <p>This request is being filed with a notice of appeal.</p> <p>The review is requested for the reason(s) stated on the attached sheet(s). Note: No more than five (5) pages may be provided.</p> <p>I am the</p> <p><input type="checkbox"/> applicant/inventor.</p> <p><input type="checkbox"/> assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)</p> <p><input checked="" type="checkbox"/> attorney or agent of record. Registration number <u>36,013</u></p> <p><input type="checkbox"/> attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34 _____</p> <p>NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.</p> <p><input checked="" type="checkbox"/> *Total of <u>1</u> forms are submitted.</p> | | | |

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February 24, 2006

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Bunn *et al.*

Appl. No.: 09/973,871

Filed: October 11, 2001

For: **Dynamic Delta Encoding for Cable
Modem Header Suppression**

Confirmation No.: 7047

Art Unit: 2154

Examiner: Lin, Kenny S.

Atty. Docket: 1875.0640001

Arguments to Accompany the Pre-Appeal Brief Request for Review

Mail Stop AF

Commissioner for Patents
PO Box 1450
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Sir:

Applicants hereby submit the following Arguments, in five (5) or less total pages, as attachment to the Pre-Appeal Brief Request for Review (Form PTO/SB/33). A Notice of Appeal is concurrently filed.

Arguments

Applicants' arguments in the Amendment and Reply under 37 C.F.R. § 1.116 filed on November 23, 2005, in response to the final Office Action mailed August 24, 2005, were not properly considered or responded to by the Examiner in the Advisory Action mailed December 12, 2005. The Examiner's response was legally and factually deficient because the Examiner failed to show where the combination of Birdwell and Chapman teaches or suggests transmitting or receiving "a delta-encoded value for each non-redundant field in said second protocol header of said subsequent TCP protocol packet, wherein said delta-encoded value represents a change in value from a respective non-redundant field in said first protocol header of said first TCP protocol packet," as recited in independent claims 1, 8, 13, and 20.

"To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art." M.P.E.P. § 2143.03, *citing In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (CCPA 1974).

The Examiner has rejected claims 1-24 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,901,049 to Chapman (hereinafter Chapman) in view of U.S. Patent No. 6,032,197 to Birdwell *et al.* (hereinafter Birdwell). The Examiner concedes that Chapman does not specifically teach transmitting or receiving a delta-encoded value for each non-redundant field in said second protocol header of said subsequent TCP protocol packet, wherein said delta-encoded value represents a change in value from a respective non-redundant field in said first protocol header of said first TCP protocol packet. Final Office Action, pp. 3 and 7. Instead, the Examiner relies on Col. 1, lines 26-58, Col. 2, lines 19-32 and 48-56, and Col. 6, lines 1-9 of Birdwell to allegedly teach these features. However, Birdwell does not teach or suggest these features. In fact, Applicants assert that Birdwell teaches away from these features. Therefore, the Examiner's continued rejections based on 35 U.S.C. § 103(a) are legally and factually unfounded.

Birdwell at col. 1, lines 19-56 describes a technique for compressing packet headers (referred to as the Jacobson technique), and the remaining cited material describes a packet header compression technique that improves upon the Jacobson technique.

Upon inspection, the Jacobson technique for compressing packet headers does not appear to have anything to do with delta encoding. Instead, the Jacobson technique merely provides a compression scheme that reduces a 40-byte TCP/IP packet header to a three-byte compressed header. Birdwell, Col. 1, lines 46-50. The compressed header has an encoded change to the packet ID, a TCP checksum, a connection number, and a change mask. Birdwell, Col. 1, lines 50-52. The compressed header is subsequently decompressed to reproduce the uncompressed header. Birdwell, Col. 1, lines 55-57. Nothing in Col. 1, lines 19-56 of Birdwell teaches or even

suggests transmitting or receiving a delta-encoded value for each non-redundant field in said second protocol header of said subsequent TCP protocol packet.

Moreover, the remaining cited material (i.e., Col. 2, lines 19-32 and 48-56, and Col. 6, lines 1-9) in Birdwell merely describes a packet header compression technique in which non-changing header fields are removed from a compressed header. Birdwell explains,

[T]he packet header compressor 32 forms a compressed header from the fields of an associated uncompressed header. Preferably, the packet header compressor 32 forms a compressed header having those fields that are subject to change from packet-to-packet, but not all of the fields in a normal uncompressed header.

Birdwell, Col. 5, lines 20-25.

Birdwell further explains,

The fields that are common to both the compressed and uncompressed headers are identical. That is, the fields themselves are not compressed. The 16-bit packet identification field, for example, is the same in both uncompressed headers and compressed headers. Compression is achieved by removing the non-changing header fields from the compressed header.

Birdwell, Col. 5, lines 31-37 (*emphasis added*).

Birdwell does not compress using delta-encoded values. Rather, it compresses by removing non-changing header fields. Fields that are subject to change from packet-to-packet are not compressed and thus Birdwell actually teaches away from Applicants' claimed invention. Applicants' claimed invention transmits or receives a delta-encoded value for each non-redundant field (i.e., fields that are subject to change from packet-to-packet).

The Examiner erroneously suggested in section 2 of the Advisory Action that compression bit value 56 of Birdwell is a delta-encoded value. Applicants respectfully disagree with this suggestion. Birdwell specifically states:

The packet encoder 34 (FIG. 2) appends a compression key 54 to each packet, regardless of whether the packet is full-length or reduced length. As shown in

FIGS. 4 and 5, the compression key 54 has a compression bit value 56 and a header index value 58. The compression bit value 56 identifies the packet as either a full-length data packet or a reduced-length data packet. In this example, the compression bit value is a one-bit compression flag that is a first binary value, such as a "0", when the data packet is full-length and a second binary value, such as a "1", when the data packet is reduced-length.

Birdwell, Col. 5, line 59 - Col. 6, line 9.

Nothing in the cited material even suggests that the compression bit value 56 of Birdwell is a delta-encoded value. Regardless, Applicants assert that using a compression bit value that is a first binary value when the data packet is full-length and a second binary value when the data packet is reduced-length is not the same as transmitting or receiving a delta-encoded value for each non-redundant field in said second protocol header of said subsequent TCP protocol packet, wherein said delta-encoded value represents a change in value from a respective non-redundant field in said first protocol header of said first TCP protocol packet.

The Examiner further stated in section 2 of the Advisory Action that "Applicant's citation of column 5, lines 20-25 and 31-37 to point out that the fields in Birdwell's compressed and uncompressed headers are identical is an incorrect statement...." However, the Examiner has misunderstood Applicants' statement. Applicants merely quoted Birdwell, which states, "***The fields that are common to both the compressed and uncompressed headers are identical.***" That is, the fields themselves are not compressed.... Compression is achieved by removing the non-changing header fields from the compressed header." Birdwell, Col. 5, lines 31-33 (*emphasis added*).

Applicants reiterate the assertion that not compressing fields that are common to both the compressed and uncompressed headers is not the same as, and in fact teaches away from, transmitting or receiving a delta-encoded value for each non-redundant field.

The Examiner has failed to establish a *prima facie* case of obviousness for at least the reason that Chapman and Birdwell, alone or in any rational combination, fail to teach or suggest transmitting or receiving a delta-encoded value for each non-redundant field in said second protocol header of said subsequent TCP protocol packet, wherein said delta-encoded value represents a change in value from a respective non-redundant field in said first protocol header of said first TCP protocol packet. Thus, Applicants assert that the Examiner's reliance upon the combination of Chapman and Birdwell in supporting an obviousness rejection is factually and legally unfounded.

Therefore, Applicants respectfully request reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) over Chapman and Birdwell.

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

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Date: February 24, 2006

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